INCH-POUND

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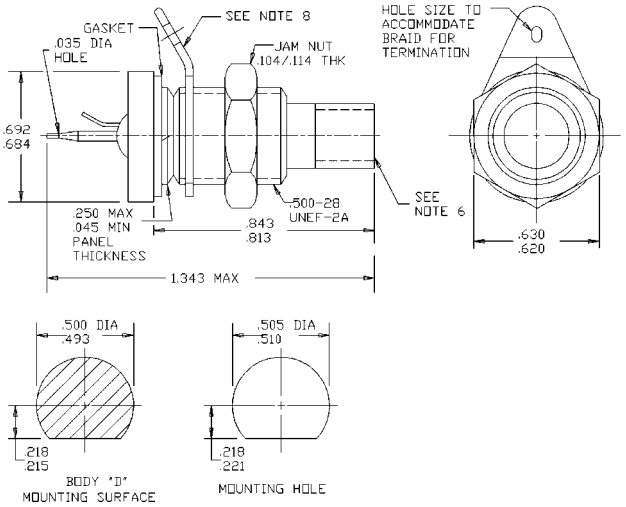
MIL-PRF-49142/10D
27 February 2002
SUPERSEDING
MIL-PRF-49142/10C
11 May 1998

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, RECEPTACLE, ELECTRICAL, TRIAXIAL, RADIO FREQUENCY, UNCABLED (SERIES TRT, SOCKET CONTACT, JAMNUT MOUNTED, CLASS 2) HERMETIC AND NONHERMETIC

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-PRF-49142.



Inches	mm	Inches	mm
.035	.88	.500	12.70
.045	1.14	.505	12.71
.104	2.64	.510	12.95
.114	2.90	.620	15.75
.215	5.46	.630	16.00
.218	5.54	.684	17.37
.221	5.61	.692	17.58
.250	6.35	.813	20.65
.493	12.52	.843	21.14
		1.343	34.11

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Wrench flats are to accommodate standard wrench openings in accordance with FED-STD-H28, appendix 10.
4. All undimensioned pictorial representations are for reference purposed only.
5. Panel thickness, .045 (1.14 mm) minimum, .250 (6.35 mm) maximum.
6. Unless otherwise specified, all tolerances are ±.005 inch (0.13 mm).
7. Interface as specified in MIL-STD-348, series TRT, socket contact.
8. Only dash numbers-0003 and -0004 are supplied with braid termination lock washer rings. All previous dash numbers are supplied with standard lock washers (internal tooth .630 max d. x .022 thick).

FIGURE 1. General configuration.

ENGINEERING DATA:

Nominal impedance: Nonconstant.

Frequency range: 0 to 500 MHz minimum.

Voltage rating: 400 V rms maximum working voltage at sea level. 100 V rms maximum working voltage at 70,000 feet.

Temperature range: -65°C to +165°C.

REQUIREMENTS:

Dimensions and configuration: See figure 1 and MIL-STD-348.

Force to engage and disengage:

Longitudinal force: Not applicable.

Torque: 2.5 inch-pounds maximum.

Coupling proof torque: Not applicable.

Inspection conditions: Coupling torque: 4-6 inch-pounds.

Mating characteristics: See figure 1 and MIL-STD-348 for dimensions.

Center contact (socket):
Oversize test pin: .040 inch diameter minimum (on closed entry contacts only).
Insertion depth: .125 inch minimum.
Number of insertions: 1

Insertion force test:
Steel test pin finish: 16 microinches.
Insertion force: 2 pounds, maximum.
Steel test pin diameter: .039 minimum.

Withdrawal force test:
Steel test pin diameter: .037 maximum.
Withdrawal force: 2 ounces minimum.
Test pin finish: 16 microinches.

Permeability: Applicable.

Hermetic seal: See table I.

Leakage: Not applicable.

Insulation resistance: 5,000 megohms.

Conductor retention: 6 pounds, minimum, axial force.

Dielectric withstanding voltage: At sea level, 1,200 V rms, between center conductor and intermediate conductor. 500 V rms, between intermediate conductor and outer conductor.

Salt spray (corrosion): Applicable.

Vibration: Applicable.

Shock: Applicable.

Thermal shock: Applicable.

Moisture resistance: Applicable.

Conductor resistance: In milliohms, maximum.

	Connector dash number	Initial	After environment
Center conductor:	All non-hermetic connectors	2.0	2.5
	All hermetic connectors	12.0	12.5
Intermediate conductor	All non-hermetic connectors	0.5	0.6
	All hermetic connectors	1.0	1.5
Outer conductor	All non-hermetic connectors	0.2	0.3
	All hermetic connectors	0.5	0.6

Corona level:
Altitude: 70,000 feet.
Voltage: 200 V rms, minimum.

RF high potential withstanding voltage:
800 V rms, between center conductor and intermediate conductor.
200 V rms, between intermediate conductor and outer conductor at 5 to 7.5 MHz.

Leakage current: Not applicable.

Cable retention: Not applicable.

Coupling mechanism retention force: Not applicable.

Rise time degradation: Not applicable.

Connector durability: 500 cycles minimum at 12 cycles per minute, maximum.

Part or Identifying Number (PIN): M49142/10- (dash number from table I).

Retention of qualification: See table II.

TABLE I. Cross reference of PIN.

Dash number	Superseding PIN
-0001 -0003 Non-hermetic	---
-0002 -0004 Hermetic	---

TABLE II. Retention of qualification.

Subgroup	/3 & /8		/4 & /10	/5 & /9		/6 & /11	
1	/3-0008	---	/4-0004	---	---	---	---
2	/3-0008	/8-0006	/4-0004	---	---	---	/11-0006
3	/3-0008	/8-0006	---	---	---	---	---
4	/3-0008	/8-0006	---	---	---	/6-0007	/11-0006
5	/3-0008	---	/4-0004	---	---	---	---
Units	15	9	9	0	0	3	6

NOTE: Revision letters are not used to denote changes due to the extensiveness of the changes.

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 11
NASA - NA
DLA - CC

Review activities:
Army - AR, AT, MI
Navy - AS, MC, OS, SH
Air Force – 19, 99

Preparing activity:
DLA - CC

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